

SECRET NO FOREIGN DISSEM

THE EFFECTS OF AIR STRIKES ON MILITARY ABILITY AND
PROBLEMS OF THE DRV IN REPLACEMENT

Assessment of effects of US air strikes on DRV military installation systems during September 1965.

1. (S) Naval Bases:

a. Two naval bases have been struck:

(1) Phuc Loi Naval Base [] - Last hit on 12 September. Seventy-eight per cent of base is destroyed. Some repair activity has been noted on recent photography.

25X1

(2) Quang Khe Naval Base [] - Last hit on 20 September. Cumulative damage to this installation is 68 per cent destroyed. Repairs to the T-head pier and marine railway have been noted.

25X1

b. Assessment:

It is estimated that these installations can still provide service and support for NVN naval units, however, at a reduced level.

2. (S) Supply Depots:

a. Present levels of destruction at targeted supply depots hit to date are as follows:

<u>Name</u>	<u>Last Hit</u>	<u>Pre-Strike Capacity (Sq Ft)</u>	<u>Remaining Capacity (Per Cent)</u>	<u>Present Capacity (Sq Ft)</u>
(1) Son La Bks, Hqs MR NW & Supply Depot []	11 Aug 25X1	295,000	64	188,800
(2) Vu Con Army Bks & Supply Area []	23 May 25X1	7,200	16	1,200

DIA review(s) completed.

EXCLUDED FROM AUTOMATIC
REGRADING; DOD DIR 5200.10
DOES NOT APPLY

SECRET NO FOREIGN DISSEM

SECRET NO FOREIGN DISSEM

	<u>Name</u>	<u>Last Hit</u>	<u>Pre-Strike Capacity</u> (Sq Ft)	<u>Remaining Capacity</u> (Per Cent)	<u>Present Capacity</u> (Sq Ft)
25X1	(3) Phu Le Army Bks & Supply Depot [REDACTED]	21 May	44,800	86	40,500
25X1	(4) Mu Gia Pass Army & Staging Area [REDACTED]		80,000	15	12,000
25X1	(5) Ha Tinh Army Bks & Supply Depot [REDACTED]	6 Sep	47,000	17	8,000
25X1	(6) Xom Trung Hoa Army Bks & Supply Depot NW [REDACTED]	8 May	93,000	29	27,000
25X1	(7) Yen Bay Ord Depot [REDACTED]	17 Jul	330,000	45	148,000
25X1	(8) Vinh, Hqs MR IV, Army Bks & Supply Depot E [REDACTED]	21 Sep	215,300	72	154,800
25X1	(9) Phu Van Supply Depot [REDACTED]	26 May	58,500	14	8,200
25X1	(10) Thien Linh Dong Whse Area [REDACTED]	13 Jun	163,300	42	68,600
25X1	(11) Vinh Son Supply Depot [REDACTED]	23 Jun	151,200	86	130,000
25X1	(12) Phu Qui Army Bks & Supply Depot [REDACTED]	22 Jun	289,700	38	110,000
25X1	(13) Thuan Chau Bks & Supply Depot [REDACTED]	16 Aug	217,000	61	132,400
25X1	(14) Vinh Loc Storage Area S [REDACTED]	20 Aug	49,000	21	10,300

SECRET NO FOREIGN DISSEM

Name	Last Hit	Pre-Strike Capacity (Sq Ft)	Remaining Capacity (Per Cent)	Present Capacity (Sq Ft)
(15) Phu Duc Whse Area [REDACTED]	27 Aug	28,100	Deleted from Tgt List	
(16) Dong Thanh Whse Area S [REDACTED]	22 Jun	71,500	46	32,900
(17) Dong Thanh Whse Area W [REDACTED]	18 Aug	54,000	62	33,500

b. Assessment:

(1) It is possible that limited operations could be resumed

[REDACTED] however, extensive repair and new construction would be required for the remaining depots. There is no evidence that restoration is being attempted.

(2) Damage levels are not believed to have reached the point where serious nation-wide equipment and supply shortages exist; however, the strikes are causing temporary shortages in some areas and is having an increasingly disruptive effect on the over-all supply system. It is likely that supplies have been dispersed to smaller, less conspicuous locations in wooded areas, caves or possibly in civilian buildings.

3. (S) Ammunition Depots:

a. Ammunition depots hit to date:

Name	Last Hit	Pre-Strike Capacity (Est)	Remaining Capacity (Per Cent)	Present Capacity (Est)
(1) Xom Trung Hoa Bks & Ammo Storage [REDACTED]	29 Aug	3,700 MT	76	2,800 MT

SECRET NO FOREIGN DISSEM

	<u>Name</u>	<u>Last Hit</u>	<u>Pre-Strike Capacity (Est)</u>	<u>Remaining Capacity (Per Cent)</u>	<u>Present Capacity (Est)</u>
25X1	(2) Phu Qui Ammo Depot [REDACTED]	4 Jun	9,000 MT	46	4,100 MT
25X1	(3) Phu Van Ammo Depot [REDACTED]	16 Jul	3,800	46	1,700
25X1	(4) Qui Hau Ammo Depot [REDACTED]	8 Jul	11,500	68	7,800
25X1	(5) Ban Phiang Hav Ammo Depot [REDACTED]	25 Jun	1,500	57	800
25X1	(6) Yen Son Ord & Ammo Depot [REDACTED]	26 Sep	10,000	42	4,200
25X1	(7) Hoai An Ammo Depot [REDACTED]	1 Jun	8,200	42	3,500
25X1	(8) Tai Xouan Ammo Depot [REDACTED]	26 Sep	7,700	97 (24 July)	7,500
25X1	(9) Xom Rung Ammo Depot [REDACTED]	31 Jul	4,100	87	3,600
25X1	(10) Ban Nuoc Chieu Ammo Depot [REDACTED]	18 Sep	11,900	52	6,200
25X1	(11) Xom Bang Ammo Depot [REDACTED]	2 Mar	5,000	25	1,250
25X1	(12) Bac Kan Ammo Depot [REDACTED]	15 Sep	2,000	36	700

b. Assessment:

(1) No effort to restore or repair the above depots has been noted to date. Many appear run-down and show little sign of use. Secondary explosions have been confirmed at only three of the depots. In view of the above, it is likely that NVN ammunition

SECRET NO FOREIGN DISSEM

stores have been dispersed to avoid the effects of the bombings. Well camouflaged areas and caves would be the most likely new locations.

(2) It does not appear that an ammunition shortage exists in the DRV to date; however, deliveries are probably being delayed.

4. (S) POL Storage:

a. There was one restrike against a POL target during September.

b. Assessment:

Attacks on POL facilities to date have reduced national capacity for POL storage by nearly 20 per cent, leaving about 155,000 tons of storage capacity still available for use.

5. (S) Barracks:

a. Barracks hit to date:

Name	Last Hit	Est Pre-Strike Capacity (men)	Bks Cap Remaining	Present Capacity (men)	% of Total Floor Space Plan Destroyed
(1) Chanh Hoa Bks [REDACTED]	11 Feb	400	45%	180	55
(2) Son La Bks, Hqs MR NW & Supply Depot [REDACTED]	11 Aug	9,000	50%	4,500	44
(3) Dien Bien Phu A Bks & Hqs 316th Bde [REDACTED]	18 Aug	10,000	80%	8,000	52
(4) Bien Xom Lom Bks & Hqs [REDACTED]	21 Jul	10,000	64%	6,400	34
(5) Quang Suoi Army Bks NE [REDACTED]	30 Jul	2,250	68%	1,530	50

Name	Last Hit	Est Pre-Strike Capacity (men)	Bks Cap Remaining	Present Capacity (men)	% of Total Floor Space Plan Destroyed
(6) Vu Con A Bks & Supply Depot [REDACTED]	23 May	500	29%	150	83
(7) Dong Hoi A Bks WNW [REDACTED]	27 Jul	5,000	24%	1,200	65
(8) Vit Thu Lu A Bks [REDACTED]	31 May	Deleted from Tgt List			
(9) Moc Chau A Bks [REDACTED]	23 Jun	750	74%	550	34
(10) Vinh Army Bks Cent. NE [REDACTED]	5 Aug	Deleted from Tgt List			
(11) Chap Le A Bks NW [REDACTED]	10 Jun	1,200	64%	770	34
(12) Ben Quang A Bks SW [REDACTED]	5 Jul	2,100	34%	710	69
(13) Hoan Lao A Bks S [REDACTED]	24 Sep	2,500	26% (22 Sep)	650	67
(14) Dong Hoi A Bks-Citadel [REDACTED]	9 Aug	2,800	23%	640	81
(15) Phu Le Army Bks & Supply Depot [REDACTED]	21 May	1,200	52%	620	34
(16) Ba Don Army Bks [REDACTED]	17 Jun	670	70%	470	30
(17) Hou Luat Nam A Bks [REDACTED]	29 Jun	Deleted from Tgt List			

SECRET NO FOREIGN DISSEM

	<u>Name</u>	<u>Last Hit</u>	<u>Est Pre- Strike Capacity (men)</u>	<u>Bks Gap Remaining</u>	<u>Present Capacity (men)</u>	<u>% of Total Floor Space Plan Destroyed</u>
25X1	(18) Don Bai Dinh Mil Camp [REDACTED]	14 Apr	400	52%	210	71
25X1	(19) Muong Sen Mil Inst [REDACTED]	12 Jun	400	28%	110	72
25X1	(20) Vinh Linh A Bks Cent NE [REDACTED]	27 Sep	1,350	61%	820	45
25X1	(21) Yen Phu Army Bks NE [REDACTED]	7 Sep	4,500	50%	2,250	47
25X1	(22) Thanh Hoa Army Bks S [REDACTED]	21 Aug	1,200	78%	940	38
25X1	(23) Thanh Hoa Bks SSE [REDACTED]	15 Jun	1,200	34%	410	71
25X1	(24) Sam Son Army Bks W [REDACTED]	16 Jun	1,100	78%	860	18
25X1	(25) Vinh Son Army Bks S [REDACTED]	19 Jul	3,500	48%	1,680	56
25X1	(26) Dong Cau Than A Bks [REDACTED]	22 Jul	5,500	35%	1,930	65
25X1	(27) Vinh Army Bks NNE [REDACTED]	5 Aug	2,500	57%	1,430	39
25X1	(28) Bai Thuong Army Bks NE [REDACTED]	22 Aug	2,500	47%	1,180	46

SECRET NO FOREIGN DISSEM

	<u>Name</u>	<u>Last Hit</u>	<u>Est Pre-Strike Capacity</u> (men)	<u>Bks Cap Remaining</u>	<u>Present Capacity</u> (men)	<u>% of Total Floor Space Plan Destroyed</u>
25X1	(29) Mu Gia Pass Army Sup & Staging Area [REDACTED]		620	26%	160	62
25X1	(30) Xom Trung Hoa Bks & Ammo Storage [REDACTED]	29 Aug	1,200	69%	830	28
25X1	(31) Xom Bang Army Bks E [REDACTED]	13 Sep	850	3%	30	86
25X1	(32) Ha Tinh Army Bks & Sup Depot [REDACTED]	6 Sep	880	69%	610	48
25X1	(33) Co Dinh Army Bks NW [REDACTED]	16 Sep	890	4%	36	98
25X1	(34) Vinh Army Bks NW [REDACTED]	16 Sep	4,000	47%	1,880	45
25X1	(35) Quan Lan Army Bks [REDACTED]	25 May	Deleted from Tgt List			
25X1	(36) Xom Trung Hoa Army Bks & Sup Depot SW [REDACTED]	8 May	1,350	34%	460	70
25X1	(37) Vinh Linh Army Bks SW [REDACTED]	10 Sep	400	6%	20	83
25X1	(38) Vinh Linh Army Bks E. Linh Cong [REDACTED]	22 Aug	1,000	10%	100	91
25X1	(39) Vinh Linh Army Bks NW Xom Cho [REDACTED]	5 Jul	1,200	13%	160	43

	<u>Name</u>	<u>Last Hit</u>	<u>Est Pre-Strike Capacity (men)</u>	<u>Bks Cap Remaining</u>	<u>Present Capacity (men)</u>	<u>% of Total Floor Space Plan Destroyed</u>
25X1	(40) Xom Y Lanh Army Bks [redacted]	17 Jun	Deleted from Tgt List			
25X1	(41) Yen Khoai Army Bks & Ammo Depot [redacted]	15 Sep	2,500	50%	1,250	41
25X1	(42) Vinh, Hqs MR IV, Army Bks & Sup Depot E [redacted]	21 Sep	5,000	57%	2,850	34
25X1	(43) Phu Qui Army Bks & Supply Depot [redacted]	22 Jun	3,000	53%	1,590	55
25X1	(44) Xom Chang Army Bks S [redacted]	30 Sep	550	73% (24 Sep)	400	39
25X1	(45) Thuan Chau Bks & Supply Depot [redacted]	16 Aug	3,000	48%	1,440	39

b. Assessment:

Although damage to these installations has been extensive in some instances, loss of barracks and support buildings in themselves, does not pose a major problem for the DRV. Adequate civilian structures are available for billeting troops and storing military supplies. The advantage to be derived, if any, from these strikes would seem to be psychological, that is, damage to morale

and corresponding effect on the will to fight. There is little evidence of any effort being exerted to rebuild or repair damaged facilities. In many cases, damaged buildings have been dismantled.

6. (S) Airfields:

a. Airfields attacked to date:

	<u>Name</u>	<u>Last Hit</u>	<u>Results</u>
25X1	(1) Na San Airfield [redacted]	22 Sep	19% of building destroyed - 10 craters in runway as of 25 June.
25X1	(2) Dien Bien Phu Airfield [redacted]	8 Jul	72% of building destroyed - 15 craters in runway.
25X1	(3) Dong Hoi Airfield [redacted]	23 Sep	30% of building destroyed - 14 craters in runway.
25X1	(4) Vinh Airfield [redacted]	1 Jul	10% of building destroyed - 14 craters in runway. Some repair activity noted.

b. Assessment:

The airfields at Vinh, Dong Hoi, Na San and Dien Bien Phu are not serviceable. The reactivation of two airfields (Bac Kan and Lang Son) in the northern portion of the DRV, coupled with a revetment and airfield improvement program, has given the DRV more flexibility in dispersing their aircraft. On 18 September, eight MIG aircraft were deployed to Kep Airfield. The current number of airfields being utilized by all types of aircraft is nine. (Bac Mai, Gia Lam, Lang Son, Phuc Yen, Kep, Kep Ha, Cat Bi, Kien An and Bac Kan).

7. (S/NFD) DRV Radar System:

a. Air strikes during September have had little or no effect on

SECRET NO FOREIGN DISSEM

the DRV radar system. [] two of five radars not operational during July returned to probable operational status during late August.

25X1

b. Assessment:

With the diversity of radars and the addition of new equipment, the loss of three sites has probably not hampered the early warning capabilities of the DRV Air Defense System. Active electronic countermeasures (ECM) operations against early warning and fire control radars in conjunction with armed reconnaissance and strike operations has been effective. Continuous wave (CW) and noise spot jamming has appeared effective against the FIRE CAN fire control radar. Early warning radars were also effectively jammed; however, in some cases tracking of strike aircraft was probably intermittently maintained.

8. (S) Armed Reconnaissance:

a. As of 30 September, 9,227 armed reconnaissance sorties have been flown.

<u>Tgt</u>	<u>Results</u>	
	<u>Destroyed</u>	<u>Damaged</u>
Vessels	316	566
Vehicles	359	366
RR Stock	156	431

b. Assessment:

No assessment of equipment losses can be made other than that shown in 8.a. above. The loss of major items of equipment poses

SECRET NO FOREIGN DISSEM

problems for the DRV, since it depends almost exclusively upon aid from the other Communist Bloc countries. Additional aid has been promised and evidence indicates that it is presently arriving in country in significant quantities.

25X1

9. (S) Surface LOC Targets:

a. Rail and Highway. Four railroad/highway

25X1

[redacted] and two railroad [redacted] bridges located

25X1

north of Vinh have been extensively damaged. This probably has caused delay in the delivery of military supplies to Vinh and certainly has placed an additional burden on the transportation system. It is estimated that the loss of these bridges will have a serious over-all effect on the military capabilities of the DRV south of Hanoi. One railroad bridge [redacted] located south of Vinh has been damaged extensively. This bridge is on a section of the inoperable Vinh-Dong Hoi rail line. Several bridges along this section of the line have been used as highway crossings.

25X1

Air strikes on the Hanoi-Lao Cai and on the Hanoi-Dong Dang rail lines have disrupted rail traffic between China and North Vietnam and China to China traffic via Hanoi. The most significant interdiction of the Hanoi-Lao Cai line has been the Lang Bun railroad bridge [redacted] destroyed by RT 28. Other bridges have been damaged or destroyed between Lang Bun and Yen Bai. Three of these bridges have been repaired. Reconstruction of the Yen Bai Railroad Yard has continued and traffic through the yard is now

25X1

25X1 possible. All other damage on this line is north of this rail yard. A major and successful strike on the Cao Nung Railroad Bridge over the Song Hoa on 20 September 1965 has disrupted rail traffic on the Hanoi-Dong Dang rail line. At present there is through rail traffic only on the Hanoi-Haiphong and Hanoi-Thai Nguyen rail lines.

Air strikes in September destroyed or severely damaged 28 additional highway bridges. Numerous restrikes were conducted against previously damaged or repaired structures. Nearly one-half of the new bridge interdictions were accomplished on Route 1A south of the 20th parallel. The remaining bridge cuts were spread from Route 6 in the northwest above the 21st parallel to Route 101 near the DMZ. To date most extensive strike damage has been effected on the following NVN routes in order of intensity: 1A, 7, 101, 15, 6, 8, 44A, 151, 19.

Over 100 highway bridges have now been interdicted. Approximately 80 of these have been reported to have alternate crossing means or restoration in progress. Of the 80, some 40 of the crossings have fords or ferry facilities. At the remaining crossings, bridge restoration, causeway construction, or realignment of roads over existing nearby serviceable bypass bridges has been attempted.

Present construction force assets cannot cope with

permanent restoration of this magnitude. Photography reveals that only expedient methods resulting in lower capacity are being undertaken. The import of ponton equipment may alleviate some of the problems in countering LOC interdiction.

Air reconnaissance has verified continued, though lower, use of trucks on critical portions of the LOC system. Truck sightings during the past month totalled approximately 210, down significantly from the previous six month average of 300 sightings. Route 15 remains the most heavily traveled, with Route 1A close behind. This traffic has been facilitated by a considerable amount of road repair and bypass construction around interdicted bridges. New truck sightings have been made on Route 124 which can be used as a bypass route skirting the major bridge interdiction on Route 1A at Ninh Binh and on Route 153.

b. Maritime Ports. During the month strikes were conducted against Quang Khe Port facilities on 15 and 20 September, against Ben Thuy Port facilities on 23 September, and against Hai Yen Port facilities on 1, 3, 5, 6, and 7 September.

Quang Khe Port facilities have sustained considerable damage (present count is 18 buildings destroyed, 3 severely damaged, 8 moderately damaged, and 12 superficially damaged). Its capability as a cargo discharge point remains intact, however, since both the T-head pier and the twin breasting platforms are serviceable. Ben Thuy Port facilities and Hai Yen Port facilities have sustained

SECRET NO FOREIGN DISSEM

considerable damage but the pier at Hai Yen remains usable.

A pilot debrief of a 28 August night mission over Ben Thuy reported lights in the port area and heavy river traffic from the port to the coast. Examination of several photo missions reveal numerous barges tied up at various places in the river during daylight with little sign of activity. This suggests the possibility of cargo transfer operations being conducted under cover of darkness -- probably across unprepared river banks.

In summary, port facilities in the southern DRV, with the exception of Ben Thuy, remain capable of discharging cargo from coastal ships or barges. But the facilities themselves are not essential to the landing of cargo. Barges and other such small craft can be unloaded without the aid of prepared piers or quays.

c. Inland Waterways. Two navigation lock facilities were damaged during September. Both locks, [REDACTED] 25X1 located on the Song Chu Canal are adjacent to small dams; significant damage included a breach of the canal embankment near [REDACTED] 25X1 However, the LOC capability of the canal, reduced by 50 per cent with the destruction of lock [REDACTED] in August, was not 25X1 significantly affected by the September strikes. Mid-September photography showed that reconstruction of [REDACTED] was under way: 25X1 the dam facility had been repaired to the point of water flowing through the structure, and breaches of the canal embankment had been repaired. The area of the destroyed lock was being prepared

SECRET NO FOREIGN DISSEM

for reconstruction of the lock facility. Vinh Son Dam on the Song Ca, (previously targeted as but subsequently deleted from the JCS list) was also damaged in late August, but with no significant reduction in the LOC capability of the Song Ca.

25X1

Armed reconnaissance against waterway craft resulted in 93 barges, 36 lighters, 6 junks, and 8 ferries being sunk or damaged. The total number of waterway craft sunk or damaged during September was 143, well below the August total. The cumulative total of craft sunk or damaged to date is 906. The absence of craft concentrations in and near vital port facilities indicates only limited daytime usage or possible night usage of the waterways. Complications arising from forced craft dispersal and concealment are estimated to have materially reduced both military and non-military logistical movement on the waterway system.

10. (S) Explosive Plant:

The Lang Chi Explosives Plant was attacked on 24 July and again on 7 and 8 August. Post strike photography revealed that the plant suffered extensive damage and is now non-operational. Analysis of photography also confirmed the estimate that the plant produced only low order or commercial explosives and its damage will have a negligible impact on military capabilities.

11. (S) General Assessment:

a. The capability of the DRV armed forces to perform its missions of (1) defending the homeland, (2) training its own forces

SECRET NO FOREIGN DISSEM

and infiltration forces for South Vietnam and Laos, and (3) logistical-ly supporting its own and the Communist forces in South Vietnam and Laos, while hampered, has not been significantly reduced. The PAVN capability to launch a major invasion of the Republic of Vietnam, however, has been substantially curtailed when compared to the period prior to initiation of the US/RVN air strikes.

b. It appears likely that ammunition stocks and some general supply items have been removed from depot areas and are located in smaller, easily camouflaged or disguised areas such as caves, heavily wooded areas and possibly in civilian type buildings. It seems unlikely under present circumstances that troops would make any extensive use of the barracks, but would most likely be bivouacked in wooded areas or in villages or towns. In many instances, military facilities appeared active until significant damage had been inflicted, then abandoned. In other cases, particularly the ammunition depots, abandonment apparently had occurred prior to the first strike.

SECRET NO FOREIGN DISSEM